

CERTAMEN MELASTOMATACEIS XXX.

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Optimistically, these notes are the final adjustments for the Flora of Ecuador. The text for about 3/4 of the Ecuadorian species of the family has already been sent to Sweden.

MERIANIA ALMEDAE Wurdack, sp. nov.

M. sanguinea Wurdack affinis, foliorum subtus pubescentia longiore calycis dentibus exterioribus eminentibus differt.

Ramuli primum rotundato-quadrangulati non alati demum teretes sicut foliorum subtus laminae petiolique dense pilis barbellatis 0.5-1 mm longis setulosi; ramulorum nodi collo stipuliformi crasso 3-5 mm alto inter petiolas armati. Petioli plerumque 2-4 cm longi ad apicem subtus tuberculis binis 0.5-1 mm longis armati; lamina (6-)8-14 X (3-)4-10 cm ovata apice hebeti-acuto basi rotundato-truncata vel paulo (usque ad 0.5 cm) cordata, subrigida et distanter serrata (serratulus crassis ca 1 mm altis), supra dense aspero-bullata bullis 0.5-1 mm altis, subtus reticulato-foveolata, 7-nervata nervis secundariis plerumque 2-3 mm inter se distantibus nervulis reticulatis. Panicula terminalis multiflora 21-31 cm longa angusta, floribus 5-meris in ramis 0.5-1 cm longis umbellatis; pedicelli 7-9 mm longi sicut hypanthia modice pinoideo-furfuracei (pilis 0.1-0.2 mm longis), bracteolis basalibus ca 0.3-0.5 X 0.1 mm caducis. Hypanthium (ad torum) 3 mm longum; calyx 1.5 mm longus truncatus, dentibus exterioribus crassis 1.2-2 mm eminentibus. Petala 9.2-10.2 X 8-9.2 mm suborbiculari-ovata glabra. Stamina isomorpha glabra; filamenta 5-5.2 mm longa; antherarum thecae 5 X 0.9 mm subulatae, poro dorsaliter inclinato 0.2 mm diam.; connectivum paullulo (0.1-0.2 mm) prolongatum ad basim dorsaliter dente hebeti 2.2 mm longo et appendice hebeti ascendi 0.5 mm libera armatum. Stigma non expansum; stylus 12 X 0.8 mm glaber in ovarii apicem 0.3 mm immersus; ovarium 5-loculare glabrum apice hebeti-lobulato.

Type Collection: R. M. King & F. Almeda 7917 (holotype US 2850594; isotype CAS), collected on a wet windswept forested ridge 10 km east of Loja on road to Zamora, Prov. Loja, Ecuador, elev. 2480 m, 31 January 1979. "Shrub 2 m, infrequent. Petals crimson red. Filaments and anthers red; appendages yellow."

Meriania sanguinea has the leaf nerves and nervules beneath pubescent with hairs only 0.2-0.3 mm long, as well as obscure non-emergent external calyx teeth. The other two species in this complex also have obsolete external calyx teeth; M. radula (Benth.) Triana lacks interpetiolar cauline flaps and ascending stamen connective tooth and has larger petals, but approximates M. almedae in lower leaf surface pubescence; M. tetragona (Cogn.)

Wurdack has branchlets subalate-quadratae and leaf blades beneath nearly glabrous. All four species occur in Loja.

**MERIANIA MACROPHYLLA** (Benth.) Triana subsp. **MERIDENSIS** Wurdack

Because of a printer's error, M. macrophylla subsp. costanensis Wurdack appeared twice in the "Suplemento a las Melastomaceas de Venezuela" (Act. Bot. Venez. 13: 133-134. 1978). D. H. Nicolson believes that this lapsus does not need formal rectification; certainly the descriptions, specimen citation, and discussion of the subspecies should make the correct applications evident. The use of subsp. costanensis for the taxon with leaves glabrate beneath (page 134) is the correct one, the first-published new subspecies (page 133) being subsp. meridensis.

**LEANDRA PASTAZANA** Wurdack, sp. nov.

Sect. Secundiflorae. L. caquetanae Sprague affinis, foliorum laminis proportionaliter angustioribus supra pilis isomorphicis ca 1-1.5 mm longis sparse strigosis subtus uniformiter pilis 1.5-2 mm longis sparsiuscule appresso-setosis differt.

Ramuli primum obtuse quadrangulati demum teretes sicut petioli laminarum subtus venae primariae inflorescentiaque pilis laevibus incurvis eglandulosis ad basim subreflexis ca 1.5 mm longis induti. Petioli 1.5-2(-3) cm longi; lamina (5-)7-10 X (1.5-)3-4 cm lanceato-elliptica apice gradatim acuminato basi late acuta vel anguste obtusa, membranacea et crenulato-serrulata, supra sparse pilis subappressis ca 1(-1.5) mm longis induta, subtus modice pilis gracilibus 1-2 mm longis setosa, 5(-7)-nervata nervis secundariis 2-3 mm inter se distantibus nervulis subtus planis obscuris areolis ca 0.5-0.7 mm latis. Panicula 3-5 cm longa pauciflora; flores (4-)5-meri in ramulis secundi, pedicellis crassis 0.3-0.7 mm longis, bracteolis 1-1.5 X 0.2-0.3 mm setulosis persistentibus. Hypanthium (ad torum) 2.2-2.5 mm longum dense pilis (1-)1.5(-2) mm longis pro parte glanduliferis setosum; calycis tubus 0.1 mm longus, lobis interioribus 0.7-0.9 mm longis ovato-oblongis, dentibus exterioribus setulosis lobos interiores aequantibus vel paulo (0.1-0.2 mm) superantibus. Petala 2.8-3.1 X 0.5-0.8 mm glabra oblongo-lanceata acuta imperspicue (0.05-0.1 mm) apiculata. Stamina in dimensionibus paullulo dimorphica glabra; filamenta 2-3 mm longa; antherarum thecae 1.1-1.4 X 0.2-0.25 X 0.25-0.3 mm oblongae poro terminali ca 0.1 mm diam.; connectivum ad basim simplex. Stigma non expansum; stylus 4.5-6 X 0.2-0.3 mm glaber; ovarium (4-) 5-loculare et 0.8-0.9 inferum, cono 0.2-0.4 mm alto sparse vel modice pilis glanduliferis 0.2-0.4 mm longis coronato.

Type Collection: A. F. Skutch 4483 (holotype US 1775503; isotype K), collected near Puyo, Prov. Pastaza, Ecuador, elev. 750-1000 m., Sept. 1939. "Shrub 1.2 m. Fl. whitish."

Paratypes (all Pastaza, Ecuador): E. Asplund 19543 (S), from the shore of Río Alpayacu, Mera, elev. ca 1050 m., 2 March 1956 ("Very slender shrub ca 1 m, hairs of calyx reddish violet,

petals white, anthers yellowish white."); G. W. Prescott 399 (NY), from Puyo, 16 Feb. 1953; Ynes Mexia 6847 (US), from between Puyo and Canelos, elev. 325-375 m, 1-3 Feb. 1935 ("Spreading shrub 1.5 m; fls white.").

Leandra caquetana has leaf blades 7(-9)-nerved and with length/width ratio mostly 1.5-2 (rather than 2.3-2.9), the blade pubescence above distinctly dimorphic in size with the long hairs mostly ca 2 mm long and the short ones 0.3-0.5 mm and beneath shorter and mostly confined to the primary and secondary veins, as well as shorter anthers. As currently understood, L. caquetana is somewhat variable in trichome appressions on the branchlets and primary leaf veins beneath; the species ranges from Colombia (Putumayo) and Ecuador (Napo, Pastaza) to Peru (Loreto: Killip & Smith 29478 and 29603, Mexia 6437, Schunke 70, Revilla 435, McDaniel & Rimachi 17317 and 17476). Some of the Peruvian material was distributed as L. francavillana Cogn. (which has denser leaf pubescence beneath and eglandular hypanthial hairs). Leandra retropila Cogn. differs from L. pastazana in the more strongly reflexed and finer caudine hairs, eglandular hypanthial hairs, and esetulose ovaries, while L. secunda (Don) Cogn. has petiolar hairs in part gland-tipped, a dense layer of minute glandular hairs along the primary leaf veins beneath, shorter hairs on the upper leaf surfaces, and slightly smaller flowers.

#### LEANDRA MACDANIELII Wurdack, sp. nov.

Sect. Secundiflorae. L. secundaria (Don) Cogn. affinis, foliorum ramulorumque trichomatibus eglandulosis arcte appressis laminarum subtus venuis superficieque non setulosis differt.

Ramuli primum obtuse tetragoni demum teretes sicut petioli laminarum venae primariae supra et subtus inflorescentiaque pilis laevibus appressis eglandulosis ca 0.5-1 mm longis modice induti. Petioli 1-3 cm longi; lamina (4-)5-9 X 2-4 cm elliptico-ovata apice gradatim acuminato basi late acuta vel obtusa, membranacea et paulo crenulato-serrulata ciliolata, supra in superficie primum sparsissime strigulosi pilis laevibus 0.3-0.5 mm longis eglandulosis demum glabrata, subtus in venis secundariis tertiarisque sparse strigulosa pilis 0.2-0.5 mm longis in venuis superficieque esetulosa, 5-nervata nervis secundariis ca 3-4 mm inter se distantibus nervulis subtus planis areolis 0.2-0.4 mm latis. Panicula 3-5 cm longa pauciflora; flores 5-meri in ramulis secundi, pedicellis obscuris 0.1-0.3 mm longis, bracteolis 0.3-0.7 X 0.1-0.2 mm persistentibus. Hypanthium (ad torum) 2.2-2.7 mm longum densiuscule strigulosum (pilis eglandulosis ca 1 mm longis) pilis glanduliferis subpatentibus debilibus ca 0.5 mm longis modice intermixtis; calycis tubus 0.1 mm longus, lobis interioribus 0.3-0.5 mm longis ovato-oblongis sparse ciliolatis, dentibus exterioribus 0.2-0.4 mm eminentibus setulosis. Petala 2-2.5 X 0.4-0.6 mm oblongo-lanceata glabra. Stamina in dimensionibus paulo dimorphica glabra; filamenta 2.1-2.9 mm longa; antherarum thecae 0.9-1.3 X 0.2-0.25 X 0.25 mm anguste oblongae, poro 0.1 mm diam. paullulo ventraliter

inclinato; connectivum ad basim non prolongatum dorsaliter obscure (0.05 mm) calcaratum. Stigma non expansum; stylus glaber 4-4.5 X 0.2-0.25 mm; ovarium 5-loculare et omnino inferum, apice pilis glanduliferis 0.2-0.3 mm longis sparsiuscule setuloso.

Type Collection: Sidney McDaniel & Manuel Rimachi 17151 (holotype US 2678417), collected in rainforest of Quebrada Yanayacu above Bomonaje, Trocha de Monte Carmelo, Dto. Indiana, Maynas, Depto. Loreto, Peru, 20 May 1973. "1 m tall, flowers white, fruit purple."

Paratypes (all deposited at US): Colombia, Putumayo: Cuatrecasas 10666, from Puerto Porvenir above Puerto Ospina, Río Putumayo, elev. 230-250 m ("Sufrutex de 40 cm; pétalos blancos; frutos rojos"); Koie 5015, from Tres Esquinas, Río Caquetá, elev. 200 m; King & Guevara 6167, from 15 km northwest of Puerto Asís, elev. 300 m ("Ca 0.5 m tall; flowers white"). Ecuador, Morona-Santiago: Cazalet & Pennington 7756, from Taisha, elev. 450 m ("2' shrublet sometimes rooting from nodes. Lvs purple below, fringed with white hairs. Petals white; stamens yellow"). Peru, Loreto: Asplund 14241 ("Flowers white") and Klug 1262 ("Shrub 50 cm; fls white"), both from Mishuyacu near Iquitos, elev. 100 m; Killip & Smith 27349, from Iquitos, elev. 100 m ("Subligneous herb 1.5-2 ft; petals and anthers white"); McDaniel & Marcos 11053, from Río Corrientes between Platanoyacu and mouth of Río Macusari ("Ca 0.3 m tall"); McDaniel & Rimachi 18418, from Río Tigre, Dto. Tigre ("0.5 m tall, corolla white, young fruit green, leaf beneath purple"); McDaniel & Rimachi 18932, from near Lago Chanchama, Río Nanay, Dto. Iquitos ("0.5 m tall, immature fruit green"); McDaniel & Rimachi 18318, from near Nauta road 2-4 km from Quisto Cocha, Maynas, elev. 150 m ("0.5 m tall, fls white"); McDaniel 15301, from Negro Urcu, Río Napo, Maynas, elev. 150 m ("Ca 0.5 m tall; mature fruit red"); Gentry & Revilla 16582, from near Base Araguana, upper Río Mazan north of Santa María de Nanay ("Subshrub 0.2 m, fruits turning red"); José Schunke 2456, from northwest of Santa María de Nanay, Alto Nanay, Maynas, elev. 130 m ("Arbusto 1 m, flores blancas, sépalos rojos violetas; hojas al envés violeta púrpura"); Velarde Nuñez 2459, from Pucallpa, Nishiuya.

Leandra secunda has short gland-tipped hairs intermixed with the longer eglandular ones on the petioles and primary leaf veins beneath, as well as leaf blades above sparsely strigulose with minute hairs and below setulose on the veins and venules. The two taxa are alike in the rather dense leaf venulation and floral features. Leandra secundiflora (DC.) Cogn. rather resembles L. macdanielii in the scanty strongly appressed vegetative pubescence, but differs in the laxer leaf venule areoles, eglandular hypanthial hairs, plumper anthers, and 3-celled ovaries. Despite the obscurely (0.1 mm) glandular-setulose ovary apices, I have referred two Loreto (Peru) collections (Schunke 252, Rio Mazan; McDaniel & Marcos 11093, Río Corrientes) to L. secundiflora; the species is perhaps to be expected in Amazonian Ecuador. The interpretation of L. secunda to be used in the Flora of Ecuador is based on notes from the Madrid and

Florence material of Ruiz & Pavón as supplemented by many recent collections; an excellent modern match for the type collection is Killip & Smith 26551 (Junín, Peru) and a good match except for slightly less appressed caudine hairs is Mexia 7270 (Napo, Ecuador). Leandra rotundifolia Macbride is dubiously distinct from L. secunda, differing only in the more patent stem hairs.

**BLAKEA JATIVAE** Wurdack, sp. nov.

B. megaphyllae Wurdack in nodorum floriferorum membranis bracteis floribusque affinis, foliorum nervis secundariis minus crebris et pagina subtus pinoideo-puberula differt.

Ramuli robusti paulo compressi sicut petioli foliorum venae primariae subtus pedicellique densiuscule et bracteae (praecipue basim versus) foliorum subtus paginaque sparse pilis pinoideis ca 0.05(-0.1) mm longis deciduis induti; floralium nodi crassi processis membranaceis acuminatis usque ad 5 X 1.5 cm mox lacertatis et deciduis armati. Petioli 5-9 cm longi; lamina 20-28 X 14-20 cm paulo obovato-elliptica apice rotundato et abruptissime ca 1 cm acuminato basi acuta et in petiolum anguste decurrenti, tenuiter coriacea et obscure calloso-serrulata, supra glabra, 7-nervata (pari debili 0.5-1 mm inframarginali neglecto) nervis secundariis ca 2.5-3 mm inter se distantibus. Flores in quoque nodo 2(-4), pedicellis 2-3 cm longis; bracteae liberae concavae obscure multivenosae paullulo rigidae intus minutissime pinoideo-puberulæ, apicibus hebeti-apiculatis; bracteae exteriores 19-22 X 22-23 mm suborbicularis; bracteae interiores 25 X 21 mm ovato-oblongæ; processus tenuiter membranacei ca 11 X 7 mm ca 4 (inter bracteas exteriores et interiores) et 2 (inter bracteas interiores et hypanthium) evoluti. Hypanthium (ad torum) 7 mm longum glabrum; calycis tubus 1.5 mm longus, lobis ovatis ca 5 X 7 mm extus manifeste carinatis. Petala in pagina glabra 27 X 14-15 mm elliptica apice hebeti-obtuso. Filamenta 9 mm longa glabra; antheræ 6.5 X 4.5 X 2 mm inter se cohaerentes minute biporosæ; connectivum ad basim e filamento dorsaliter ca 2 mm rotundato-elevato. Stigma non expansum; stylus 12 X 1.5-1 mm minute modiceque glandulosus; ovarium 6-loculare, cono 5.5 mm alto glabro costulato apice truncato (collo non evoluto).

Type Collection: Carlos Jatíva & Carl Epling 1128 (holotype US 2639753; isotypes NY, US), collected in tall forest at junction of Río San Juan and Río Camumbi near Tobar Donoso, Prov. Esmeraldas, Ecuador, elev. 150 m, 25 July 1966. "Shrub; flowers white."

Blakea megaphylla has glabrous 11-nerved leaf blades with secondary veins 0.5-1 mm apart, calyx lobes only 1.1-1.5 mm long and ovary cone only 3 mm long, but similar bracts, stamens, and style. Other Colombian species with very large leaf blades (B. allotricha Uribe, B. florifera Gleason, B. paleacea Gleason, B. pilosa Gleason, B. squamigera Uribe ex char., as well as several undescribed taxa from Chocó, Valle, and Nariño) all differ in foliar pubescence and/or floral features. I had not previously observed in the genus (but may have missed in dissection) hyaline scales between the usual two pairs of floral

bracts, although B. pilosa apparently does have ciliolate long setae similarly placed.

BLAKEA ERIOCALYX Wurdack, sp. nov.

B. repenti (R. & P.) D. Don affinis, processibus stipuliformibus longioribus stylo glabro ovarii cono paulo breviore differt.

Ramuli nodosi primum obtuse tetragoni demum teretes sicut folia primum villosuli pilis gracillimis ca 2 mm longis caducis; nodi caduce strigosi (pilis 3-5 mm longis) et inter petiolos processibus stipuliformibus demum deciduis 12-15 X 6-7 mm oblongo-lanceatis acuminatis extus glabris intus dense paleaceo-strigosis (pilis 2-3 mm longis) armati. Petioles 2.5-4 cm longi; lamina 15-23 X 8-13 cm elliptica apice abrupte 1-1.5 cm caudato-acuminata basi obtusa, firme chartacea et calloso-serrulata (dentibus ca 0.2 mm altis), ad maturitatem supra glabra et subtus in venis secundariis densiuscule in pagina sparsiuscule pilis 0.1-0.3 mm longis paulo asperis setulosa, 5-nervata (pari debili ca 2 mm inframarginali inclusa) vel paulo (usque ad 0.5 cm) pseudoplinervata nervis secundariis ca 3 mm inter se distantibus tertiaris subtus paullulo evolutis. Flores in quoque nodo superiore 4-6, pedicellis 2-2.5 cm longis; bracteae omnino liberae firme chartaceae multinervosae obovato-oblongae apice rotundato extus glabrae intus centraliter sparse strigosae (pilis 1-2 mm longis); bracteae exteriores 18-20 X 14-18 mm; bracteae interiores 20-24 X 15-17 mm. Hypanthium (ad torum) 8-9 mm longum extus modice setulosum pilis crispulis 0.5-1 mm longis intus glabrum; calycis tubus 1.5-2.5 mm longus, lobis 3.5-4 X 6-8 mm oblati ad basim lateraliter paullulo imbricatis extus modice setulosis intus apicem versus modice strigulosis basim versus glabris. Petala 29-34 X 20-30 mm obovata apice rotundato-truncata sparse caduceque glanduloso-ciliolata alioqui glabra. Filamenta 9 mm longa glabra; antherae 5-6 X 3-3.2 mm inter se cohaerentes, poris binis minutis terminalibus; dens dorso-basalis 1.8-2 mm longus acuminatus. Stigma non expansum; stylus glaber 17 X 1-0.5 mm in ovarii collo 1-1.5 mm immersus; ovarium 6-loculare, cono 1.2-2 mm alto glabro.

Type Collection: E. Asplund 17244 (holotype S), collected at Los Puentes near Nanegal, Prov. Pichincha, Ecuador, elev. 1200 m, 11 August 1955. "Liana; flowers pink."

Paratypes (both Pichincha, Ecuador): A. Sodiro 524b (BR), from "silv. subtrop. v. Gualea, 9/903"; Harling & Andersson 11545 (GB), from mountain rain forest at Palmitopamba ca 10 km NNW of Nanegal, alt. 1300 m, 23 Jan. 1974 ("Shrub ca 1.5 m. Corolla pink").

Blakea repens has oblate stipuliform flaps 2-3 mm long at the young branchlet nodes, glandular-puberulous style, and ovary cone 3.5-5 mm long. For the Flora of Ecuador, the B. repens population complex has not been fragmented, the variability in pubescence of vegetative and reproductive organs and spacing of secondary veins probably intolerable under a simple binomial to a monographer; the salient features include the stipuliform

cauline appendages subtended by setae, the large rounded and free floral bracts, the more-or-less pubescent hypanthia, large calyx lobes, non-expanded stigma, glandular-puberulous style, large ovary cone (with a prominent stylar collar), and well-developed connective spur. Blakea villosa Cogn., from the description and type photograph, seems to be closely related to B. repens, but I have not studied Weberbauer 5032 for stylar and connective appendage features nor has any recent Peruvian material exactly comparable to the type been seen. One of two collections from eastern Ecuador (Acosta Solís 7482, Huamboya, Morona-Santiago; Asplund 19377, Cashurco-Río Zúñiga, Pastaza) which are perhaps not conspecific may be referable to B. villosa; the Asplund material apparently differs from the photograph of B. villosa in the densely appressed-setose branchlets and obviously appressed-setose outer surfaces of the bracts and from the more pubescent phases of B. repens in the small anther spurs.

**BLAKEA LANUGINOSA** Wurdack, sp. nov.

B. eriocalyci Wurdack affinis, foliorum subtus pubescentia lanata persistenti nodorum processibus stipuliformibus oblatis longe ciliatis floribus minoribus differt.

Ramuli primum sulcato-quadrangulati demum teretes dense pilis incurvo-erectis 3-5 mm longis demum deciduis induiti; nodi dense appresso-setosi pilis robustis 10-16 mm longis et inter petiolos processibus stipuliformibus 4-5 mm longis oblatis longe ciliatis demum deciduis armati. Petioli 3-4 cm longi robusti; lamina 16-25 X 9-13 cm elliptica vel oblongo-elliptica apice breviter (ca 5 mm) abrupte hebeti-acuminato basi obtusa, subrigida et obscure distantemente calloso-serrulata, supra glabra, subtus dense persistente lanuginosa pilis gracillimis longis laxis et densiuscula pilis 0.1-0.3 mm longis ad basim stellulatis setulosa, 7-nervata (pari exteriore ca 1-1.5 mm inframarginali inclusa) nervis secundariis 3-4 mm inter se distantibus. Flores in quoque nodo superiore 4-6, pedicellis 10-12 mm longis; bracteae omnino liberae firme membranaceae late suborbicularares (apice rotundato-truncata) extus glabrae intus centraliter modice strigosae; bracteae exteriores 14-15 X 18-20 mm; bracteae interiores 13 X 19 mm. Hypanthium (ad torum) 6 mm longum dense strigosum pilis gracilibus ca 2 mm longis; calycis tubus 2-3 mm longus, lobis 0.6-1.5 mm longis oblatis. Petala glabra 15-20 X 16-18 mm obovata apice rotundato-truncata. Filamenta 4.2-4.4 mm longa glabra; antherae 4-4.5 X 2.3-3 mm, poris binis minutis terminalibus; dens dorso-basalis ca 2 mm longus acutus. Stigma non expansum; stylus glaber in ovarii collo ca 1 mm immersus; ovarium 6-loculare, cono ca 2 mm alto glabro.

Type Collection: Benkt Sparre 17395 (holotype S), collected in secondary rain forest at Km 72 of Chiriboga-Toachi road, Prov. Pichincha, Ecuador, elev. 1500 m, 5 July 1967.

Paratype: Padilla 128 (AAU), from Bancos, northeast slopes of Pichincha, Pichincha, January 1973.

Blakea eriocalyx (vide supra) has the villose cauline and foliar hairs promptly deciduous, the eciliate stipuliform nodal

processes oblong-lanceate and 12-15 mm long, and the larger flowers with more prominent calyx lobes.

**BLAKEA PICHINCHENSIS** Wurdack, sp. nov.

B. hispidae Markgraf affinis, foliis 7-nervatis bracteis brevioribus antherarum calcaribus dorsalibus acutis differt.

Ramuli teretes sicut petioli laminarum venae primariae subtus pedicellique dense incurvo-setosi pilis laevibus (ad basim expansam ipsam obscure asperis) plerumque (2-)3-4 mm longis; ramulorum nodi processibus stipuliformibus ca 4 mm longis semicircularibus dense ciliatis caducis armati et dense appresso-setosi setis 5-7 mm longis circum petiolorum bases ca 1 mm crasse manicati. Folia in quoque pari in dimensionibus paulo disparilia; petioli 1.5-3.5 cm longi; lamina (9-)12-20 cm longa (acumine excluso) et (4-)6-8.5 cm lata, oblongo-elliptica apice abrupte 2-2.5 cm caudato-acuminato basi late acuta, subcoriacea et obscure distanterque undulato-serrulata, supra primum sparse strigillosa pilis gracillimis mox deciduis subtus in superficie modice setulosa pilis gracilibus paulo crispulis ca 1-1.5 mm longis, 7-nervata (pari exteriori tenui inframarginali inclusa) vel paulo (0.5-0.7 cm) plinervata nervis secundariis plerumque 3-4 mm inter se distantibus. Flores in quoque nodo superiore 6-8(-10), pedicellis 2-2.5 cm longis; bracteae omnino liberae oblongo-ovatae extus modice appresso-setosae pilis 1-2(-3) mm longis intus ad apicem sparse strigulosae alioque glabrae; bracteae exteriores 12 X 8 mm, apice per 2-3 mm hebeti-acuminato; bracteae interiores 10 X 8 mm, apice hebeti-acuto. Hypanthium (ad torum) ca 3 mm longum extus dense strigosum pilis 2(-3) mm longis; calycis tubus ca 0.8 mm altus, lobis ca 0.7 mm altis oblatis extus dense strigosis. Petala ca 18 X 10 mm obovato-oblonga apice rotundato sparse caduceaque glanduloso-ciliolata (0.05 mm) alioqui glabra. Filamenta ca 6 mm longa glabra; antherae inter se cohaerentes ca 4 X 2 mm (connectivis inclusis) ad apicem minute biporosae; dens dorso-basalis ca 1.5 mm longus crassus hebeti-acutus. Stigma non expansum; stylus glaber in ovarii collo ca 1 mm immersus; ovarii conus ca 2 mm altus glaber, apice ca 0.2 mm denticulato.

Type Collection: E. Asplund 17462 (holotype S; isotype S), collected on a rivulet shore at Santa Ana on road from Chiriboga to Santo Domingo de los Colorados, Prov. Pichincha, Ecuador, elev. ca 1400 m, 25 Aug. 1955. "Shrub with few long branches (but hardly climbing); flowers somewhat reddish white."

Blakea hispida (vide infra) has only weakly 5-nerved (and usually smaller) leaf blades, bracts 15-20 mm long, an oblong terminally truncate dorsal appendage on the anthers, and a more-or-less glandular-puberulous style. The two species have qualitatively similar vegetative trichomes and stipular appendages at the branchlet nodes. The Colombian B. stipularis Wurdack seems somewhat more distantly related, having shorter and gradually short-acuminate leaf blades not setulose on the surface beneath, as well as obtuse floral bracts which are deciduously fine-strigulose externally.

**BLAKEA HISPIDA** Markgraf subsp. **STENOPIETALA** Wurdack, subsp. nov.

Florum bracteis hypanthiisque dilute setosis petalis ca  
15 X 5-7 mm differt.

Type Collection: Ynes Mexia 7098 (holotype US 1663038; isotype NY), collected in overgrown pastureland at Zatzayacu, Prov. Napo, Ecuador, elev. 400-500 m, 22-28 March 1935.

"Scadent shrub with spreading branches; fls white."

Paratype: Grubb, Lloyd, Pennington, & Whitmore 131 (US), from Talag 15 km SSW from Tena, Prov. Napo, Ecuador, elev. 600 m, 11/7/1960. "Shrub to 8 ft. Fls white."

The typical subspecies, known to me (ex descr.) from the topotypical Harling, Storm, & Ström 9833 as well as two other collections, has bracts externally moderately setose with hairs 2-3 mm long (rather than sparsely, with hairs 1-2 mm long), hypanthia moderately to densely setose with hairs 2-3 mm long (rather than rather sparsely, with hairs 1-1.5 mm long), and petals 20-25 X 9-12 mm. Both collections of subsp. stenopetala had been distributed as B. incompta Markgraf (and indeed the Talag specimen shows more extreme foliar dimorphism than the Zatzayacu material); that species, known from two recent excellent Pichincha collections (Asplund 7316 and 8684) lacks stipuliform flaps at the branchlet nodes, the petals are 15-20 mm wide, the anthers without a dorsal calcar, and the ovary cone without a stylar collar.

**BLAKEA SUBVAGINATA** Wurdack, sp. nov.

In aspectu superficiali B. subconnatae Triana affinis, antherarum connectivis dorsaliter ad basim cornu armatis differt.

Ramuli robusti primum hinc et inde quadrati demum teretes sicut folia primum indumento appresso amorpho-subsquamato induiti mox glabri; linea interpetiolaris crassa paulo (ca 0.5 mm) elevata evoluta. Petioli 3-6 cm longi basim versus paulo (ca 3 mm) vaginati; lamina 15-23 X 8-15 cm late elliptica apice abrupte per ca 0.5 cm hebeti-acuminato basi late acuta vel obtusa, firme chartacea et essentialiter integra, 5-nervata (pari debili 0.5-1 mm inframarginali neglecto) nervis primariis ad basim obscure a membrana coalitis nervis secundariis principibus 2-3 mm inter se distantibus. Flores in quoque nodo superiore (2)-4(-6), pedicellis 2-3.5 cm longis apicem versus paulo expansis; bracteae liberae membranaceae multinervosae glabrae; bracteae exteriores 15-16(-25) X 14-16(-22) mm late obovatae vel suborbicularis apice rotundato et interdum hebeti-mucronulato; bracteae interiores 12-15(-19) X 15-19(-22) mm suborbicularis apice rotundato-truncato. Hypanthium (ad torum) 9-10 mm longum glabrum; calycis tubus 1.5-2 mm longus, lobis 1-1.5 X 5-6 mm oblates paulo emarginatis glabris. Petala glabra 20-24(-28) X (11-)15-20(-28) mm obovata apice rotundato-truncato. Filamenta 9-9.5 mm longa glabra; antherae inter se lateraliter cohaerentes 6-7 X 4-4.5 X 2.3-2.5 mm ad apicem minute biporosae; dens dorso-basalis 1-1.5 mm longus hebeti-acutus. Stigma capitellatum ca 0.4-0.5 mm altum et 1.7-1.8 mm diam.; stylus 15-20 X 1-1.3 mm glaber; ovarium 6-loculare, cono 1.5-2 mm alto

glabro apice truncato collo non evoluto.

Type Collection: E. Asplund 18393 (holotype US 2441366; isotypes NY, S), collected at Río Negro on shore of Río Pastaza, Prov. Tungurahua, Ecuador, elev. ca 1200 m, 12 Nov. 1955. "Epiphytic shrub, petals pink, anthers yellow."

Paratypes (all Ecuador): Harling, Storm, & Ström 9985 (GB, US), from Río Negro, Tungurahua ("Tree 8-10 m high. Corolla pale violet red"); Harling 3853 (NY, S), from Borja (Virgilio Davila), Río Quijos, Napo, elev. 650 m, 15-26 Jan. 1959 ("Large epiphyte; flower fragrant, corolla violet red"); Holger Lugo 89 (GB, US), from Colonia Játiva 15 km from Mera, Pastaza, 4 July 1968 ("Tree 12-15 m high. Corolla rose-coloured"); Dodson & Thien 2018 (US), from Topo on Baños-Puyo road, Pastaza, elev. 1300 m, 9 Jan. 1962 ("Tree 25 ft. high; sepals green; petals pink with some white; anthers yellow; filaments white"); Flowman & Davis 4521 (US), from hills above Mera, Pastaza, elev. 1200 m, 24 Nov. 1974 ("Tree 10 m tall in swampy woods. Calyx pale green").

Blakea subconnata has somewhat closer spacing of the secondary leaf veins, ecalcarate anthers, an elongate-capitate stigma, and glandular-puberulous style, but similar bracts (in texture and venation) and leaves. In foliage and bracts, B. subvaginata also rather resembles B. repens (R. & P.) D. Don, which has setose young branchlet nodes with stipular flaps, bracts strigose within, longer calyx lobes, unexpanded stigma, glandular-puberulous style, and a well-developed ovary collar around the style base. The material of B. subvaginata had been previously distributed as B. subconnata.

#### BLAKEA ACOSTAE Wurdack, sp. nov.

B. incompta Markgraf affinis, foliis paulo disparilibus subtus minus pubescentibus bracteis ad apicem rotundatis calycis lobis et ovarii cono longioribus differt.

Ramuli primum paulo quadrangulati demum teretes sicut petioli laminarum venae primariae subtus pedicellique modice pilis incurvis plerumque 1-2 mm longis basim versus expansis et paulo asperis induti. Folia in quoque pari in dimensionibus paulo (1:1.5-1.6) disparilia; petioli 1.5-2 cm longi graciles; lamina 6-11 (acumine excluso) X 3.5-7 cm elliptica vel oblongo-elliptica apice abrupte 1-1.5 cm caudato-acuminato basi late acuta vel obtusa, firme chartacea et integra, supra primum sparse strigulosa mox glabrata, subtus in venis secundariis sparse incurvo-setulosa (pilis ca 1 mm longis basim versus paulo expansis et asperis) in pagina glabra, 3-nervata (pari inframarginali debili neglecto) venis secundariis principalibus 1(-2) mm inter se distantibus. Flores in quoque nodo superiore bini, pedicellis (3-)4-4.5 cm longis; bracteae liberae chartaceae suborbicularis (apice rotundata) extus sparse et intus centraliter modice strigosae pilis 1-1.5 mm longis; bracteae extiores 22 X 20-22 mm, interiores 23 X 17 mm. Hypanthium (ad torum) 8.5 mm longum extus basim versus sparse strigulosum; calycis tubus 2 mm longus, lobis 6 X 7-7.5 mm oblongis rotundatis ubique centraliter sparse

strigulosis. Petala 25 X 20-22 mm obovata (apice rotundato) marginibus glandulosis exceptis glabra. Filamenta 7.5-8 mm longa glabra; antherae 5.5 X 2.5 X 2 mm lateraliter cohaerentes apice minute biporosae (poris ca 0.1 mm diam. et ca 1 mm distantibus); connectivum dorsaliter paulo elevatum ecalcaratum. Stigma non expansum; stylus 13 X 1.5 mm modice et breviter (0.1-0.15 mm) glandulosus; ovarii conus ca 5 mm longus collo sparse glanduloso paullulo (0.1-0.2 mm) evoluto.

Type Collection: M. Acosta Solís 5271 (holotype F 1240479), collected between Bucay and Hacienda "Rosa Mercedes", Prov. Chimborazo, Ecuador, elev. 600 m, 12 August 1943. "Melastomácea arborea de flores blancas y cáliz rojiso o algo rosado."

Paratype: J. A. Steyermark 52819 (F), from dense rich jungle between Rio Blanco and Rio Norcay on road between Chacanceo and Molleturo, Prov. Azuay, Ecuador, elev. 1520 m, 4 June 1943. "Shrub 15 feet tall; flowers white. Vern. name: Agua de Mono."

Blakea incompta has similar style and stamens, but leaves beneath more densely and persistently setose and strongly disperilous in each pair, narrowly ovate acuminate bracts only 0.6-1.2 cm wide, densely sericeo-strigose hypanthia, triangular calyx lobes only 2-3 mm long, and ovary cone only 0.5 mm high. The bracts of B. acostae in shape and texture are like those of B. subconnata Berg ex Triana and its relatives.

BLAKEA HIRSUTISSIMA (Macbride) Wurdack var. GLANDULIFERA Wurdack, var. nov.

A var. hirsutissima differt foliis plerumque minoribus ramulorum foliorumque setis plerumque glanduliferis.

Type Collection: G. Harling & L. Andersson 12868 (holotype GB; isotype US), collected along the Limón (General Plaza)-Macas road ca 20 km from Limón, Prov. Morona-Santiago, Ecuador, elev. 700-900 m, 26 March 1974. "Liana. Corolla pink."

The typical variety has leaf blades mostly 15-23 X 7-14 cm (rather than 9-14 X 4-6 cm), very dense and mostly eglandular caudine hairs, and only a very small proportion of the foliar hairs gland-tipped. The Ecuadorian variety chontalensis (Wurdack) Wurdack has much shorter and mostly eglandular caudine and foliar hairs. Harling & Andersson 13028 (7 km NW of General Proaño, Morona-Santiago, 1100 m) has pubescence as in var. glandulifera, but smaller leaf blades; this collection is perhaps abnormal since most flowers have the inner bract pair not evolved (1 dissected flower, however, with a single interior bract).

BLAKEA CILIATA Markgraf, Notizbl. 9: 1146. 1927.

Topoeba ciliata Cogn., DC. Mon. Phan. 7: 1089. 1891.

Cogniaux' observations on the stamens from the holotype (P) were obviously based on a rather crumpled Cassia flower at the lower lefthand corner of the herbarium sheet, neither petals nor stamens being attached to the several melastome flowers associated with the leafy branchlets. From a description of this legume flower furnished to Rupert Barneby, an excellent

floral match was obtained under *Chamaefistula gigantifolia* Britton & Rose (to be treated by Irwin & Barneby as a variety of *Cassia macrophylla* Kunth). Barneby had already examined a Poortman collection (P) of this *Cassia* and probably the flower on the melastome sheet was an inadvertent stray in mounting. The Poortman collection of *T. ciliata* is without number or detailed locality. Fortunately Markgraf's binomial applies to the same species. Apart from the Poortman collection and Tessmann 4200 (NY), *B. ciliata* is known from Wurdack 1982 (Quebrada Tambillo, Río Marañón) and Ellenberg 3516 (Puerto Nazareth), both Prov. Bagua, Depto. Amazonas, Peru, elev. 425-540 m.

Hugo A.-C. Poortman collected under André's guidance and Mamé's and Drake del Castillo's subsidies in southernmost Ecuador and northernmost Peru (Huacabamba, Piura) from as early as 9 Nov. 1881 until at least 19 Jan. 1883 (Biblioth. Bot. 116: 50. 1937; Rev. Hort. 58: 60. 1886). He published an account of the ornamental plants seen during a trip from Loja to Zamora (Une excursion botanique dans les Andes. Bull. L'Assoc. Anc. Elèves de l'Ecole d'horticul. Vilvorde 4: 20-30. 1890. See Bot. Centralbl. 45, 3: 94. 1891); a copy of this travelogue was kindly furnished by André Robyns (BR). Drake del Castillo described *Poortmannia* (Bull. Soc. Philom. Paris Sér. 8, 4[3]: 128-129. 1892), this solanaceous genus now synonymized under *Trianaea*. Poortman's collection numbers were not entirely chronological; the Paris sheets usually have fairly detailed habit and geographic data. The following list of his gatherings was assembled from perusal of several monographs and published parts of the Flora of Ecuador, file information from R. C. Barneby, L. B. Smith, and D. C. Wasshausen, and my own melastome notes.

<u>Number</u>	<u>Locality</u>	<u>Date</u>	<u>Species</u>
16	Route de Císné	19 Oct. 1881	<u><i>Miconia macrotis</i></u> Cogn. var. <u><i>canescens</i></u> Gleason
23	Zaruma		<u><i>Miconia ibaguensis</i></u> (Bonpl.) Triana
57	Chonta Cruz		<u><i>Passiflora cumbalensis</i></u> (Karst.) Harms and <u><i>P. mixta</i></u> L. f. var. <u><i>eriantha</i></u> (Benth.) Killip
78	Loja to Císné	3 Nov. 1881	<u><i>Tillandsia purpurea</i></u> R. & P.
90	Císné	22 Oct. 1881	<u><i>Miconia poortmannii</i></u> (Cogn.) Wurdack

<u>Number</u>	<u>Locality</u>	<u>Date</u>	<u>Species</u>
106	Chonta Cruz	7 Nov. 1881	<u>Miconia denticulata</u> Naudin
13 <sup>4</sup>	Saraguro	Jan. 1882	<u>Aechmea drakeana</u> André
149	prés de Loja	9 Nov. 1881	<u>Meriania drakei</u> (Cogn.) Wurdack
162	Santiago	20 Nov. 1881	<u>Miconia capitellata</u> Cogn.
175	Chuquiribamba	19 Nov. 1881	<u>Miconia cf. denticulata</u> Naudin
205	Huacapamba		<u>Fuchsia sessilifolia</u> Benth.
229	Gonzanama		<u>Saritaea magnifica</u> (Sprague ex v. Steenis) Dugand
247	Cerro de Santa Rosa	19 Jan. 1881	<u>Aphelandra grangeri</u> Leonard
263	Quilarza		<u>Arrabidaea chica</u> (H. & B.) Verl.
269	Cordillera Zamora		<u>Fuchsia loxensis</u> H.B.K.
313	Rio de St. Francisco	5 Jan. 1882	<u>Justicia</u> sp. nov.
346	Zamora (Zaraguro)	22 Jan. 1882	<u>Aphelandra jacobinioides</u> Lindau
351	Zamora	23 Jan. 1882	<u>Chamaefistula gigantifolia</u> B. & K.
352	Zamora (Zaraguro)	25 Jan. 1882	<u>Mendoncia lindavii</u> Rusby
401	Zamora		<u>Huberia peruviana</u> Cogn.
416	Zamora		<u>Guzmania conifera</u> André ex Mez
442	Chuquiribamba, 2800 m.	May 1882	<u>Justicia</u> sp. nov.

<u>Number</u>	<u>Locality</u>	<u>Date</u>	<u>Species</u>
469	Císné-Ambocas	May 1882	<u>Tillandsia umbellata</u> André
476	Chinchanga		<u>Pitcairnia heterophylla</u> (Lindl.) Beer
478	Chinchanga		<u>Tillandsia conferti-flora</u> André
484	Huacapamba	19 Jan. 1883	<u>Centronia sessilifolia</u> Cogn.

BLAKEA OLDEMANII Wurdack, sp. nov.

B. campii Wurdack affinis, foliorum subtus venis primariis dense pinoideo-setulosis bracteis ad basim latioribus calycis lobis longioribus hypanthiis glabratris differt.

Ramuli plus minusve quadrati primum sicut petioli laminarum venae primariae subtus pedicellique pilis barbellatis intertextis ca 0.5-1 mm longis demum deciduis dense puberuli. Petioli 2-3 (-4) cm longi; lamina 11-18(-23) X 5.5-9(-14.5) cm, elliptica apice breviter (ca 0.5 cm) subabrupte hebeti-acuminato basi late acuta vel obtusa, subrigida et essentialiter integra, supra glabra, subtus in pagina sparse pilis 0.5-1 mm longis apicem versus subclavatis et barbellatis subpersistentibus setulosa, 5-nervata (pari tenui ca 2-3 mm inframarginali inclusa) nervis primariis interioribus ad basim paulo poculato-coalescentibus nervis secundariis obscuris 2-3(-4) mm inter se distantibus. Flores in quoque nodo superiore (2-)4(-8), pedicellis ca 2 cm longis; bracteae omnino liberae subrigidae demum subpatulae primum extus modice et intus sparse subamorpho-furfuraceae demum glabratiae ad basim late (ca 4 mm) affixae; bracteae exteriores 9-11.5 X 7.5-9 mm oblongo-ellipticae apice hebeti-acuto; bracteae interiores 8-10 X 8-11 mm suborbicularia apice subrotundato. Hypanthium (ad torum) ca 4 mm longum glabrum vel sparse sub-amorpho-furfuraceum; calycis tubus ca 1 mm longus, lobis late triangularibus ca 1.5-2.5 mm longis extus densiuscula furfuraceis. Petala ca 14 X 9-10 mm elliptica apice hebeti-acuto vel obtuso in pagina glabra. Filamenta ca 4-4.5 mm longa; antherae ca 4 X 2 X 1.5 mm inter se cohaerentes, poris duobus minutis terminalibus, dente dorso-basali hebeti ca 1-1.4 mm elevato. Stigma non expansum; stylus ca 8 X 0.6-0.3 mm glaber; ovarium 6-loculare, cono ca 2-2.5 mm alto costulato glabro apice truncato (collo non evoluto).

Type Collection: Oldeman 3450 (holotype US 2789068), collected in 30-year old forest at Km 33 of San Juan-Chiriboga road, Prov. Pichincha, Ecuador, elev. 2700 m, 2 April 1976. "Arbol de 4 mts. de alto, epiphyta ?. Raíces adventicias. Peciolas a veces rojos. Brácteas con bordes rojizos al igual que el cáliz, corola blanca, estambres amarillos."

Paratypes (all Pichincha, Ecuador): B. Sparre 14925 (S),

from cloud forest at Dos Novias, Km 16 on Aloag-Sto. Domingo road, elev. 2600 m; Sparre 17039 (S), from Km 43-45 of Nononanegal road, Río Alambi, elev. 2200-2500 m; Sodiro 522b (BR), from "silv. suband. m. Atacatzo"; Sodiro 521 p. p. (BR, P), probably from Conzacoto ("Frutex v. arbuscula 3-5 metr."); Sodiro 521c (P), from "silv. suband. vulc. Atacatzo" ("Arbor humilis patula").

Blakea campii has leaf blades beneath with only sparse and deciduous stellulate-pinoid hairs ca 0.1(-0.2) mm long, bracts at the base narrowed and only 1-1.5 mm wide (the hypanthium thus partly visible), calyx lobes 0.3-0.5 mm long, and hypanthia densely furfuraceous with stellulate-pinoid hairs 0.1-0.2 mm long. Blakea quadriflora Gleason, a glabrous species with barely lobed calyx limb, seems somewhat more distantly related. Sodiro 521 (BR) is a mixed collection from "Conzacoto et val. Pallatanga"; the right-hand sprig (probably from Conzacoto) is B. oldemanii, while the left-hand sprig (inadequate for detailed study and not matched among more recent collections) is an undescribed (but related) taxon with smaller more acuminate leaf blades and smaller flowers.

#### BLAKEA MADISONII Wurdack, sp. nov.

B. campii Wurdack affinis, innovationibus tantum stellato-pinoideo-puberulis bracteis latioribus antherarum connectivis ad basim appendice longiore acute acuminata armatis differt.

Ramuli primum obscure quadrangulati demum teretes sicut petioli laminarum subtus venae primariae pedicelli bracteaeque sparsiuscule caduceque pilis pinoideis ca 0.1 mm longis granulosi; ramulorum nodi paulo incrassati. Petioli 1-2 cm longi; lamina 4-7(-9) X 3-5(-6.5) cm obovato-elliptica apice obtuso et abrupte ca 1-2 mm apiculato basi obtusa, coriacea et integra, ubique primum sparse lepidibus minutis induta supra mox glabrata, 5-nervata (pari debili ca 2 mm inframarginali inclusa) paribus exterioribus subtus ad basim poculis corneis 1-2(-3) mm longis ornatis nervis secundariis ca 1-1.5 mm inter se distantibus obscuris. Flores in quoque nodo superiore 2-4, pedicellis 1.3-1.8 cm longis; bracteae omnino liberae firmae demum patentes ellipticae vel oblongo-ellipticae; bracteae exteriores 9-10 X 6-6.5 mm apice hebeti-acuto basi ipsa 3 mm lata; bracteae interiores 13.5 X 10.5-11 mm apice rotundato basi ipsa 2.5 mm lata. Hypanthium (ad torum) 5 mm longum extus modice stellulato-pinoideo-puberulum; calyx 2 mm longus et paullulo (0.1-0.2 mm) 6-undulatus. Petala glabra 13-13.5 X (8-)10.5 mm obovata apice rotundato-obtuso. Filamenta 4-4.3 mm longa; antherae 4 X 3 X 1.2 mm oblongae inter se cohaerentes minute biporosae; connectivum dorsaliter ad basim calcari 3 mm longo acuminato armatum. Stigma non expansum; stylus 11 X 0.8-0.5 mm glaber; ovarii conus 1-1.8 mm altus collo 0-0.3 mm longo hebeti-lobulato obscure (0.03 mm) glanduloso.

Type Collection: M. T. Madison, T. C. Plowman, H. A. Kennedy, & L. Besse 5243 (holotype US 2847799; isotype SEL), collected in wet submontane forest near Lita on Ibarra-San

Lorenzo RR, Prov. Esmeraldas, Ecuador, elev. 550-650 m, 11 June 1978. "Epiphytic shrub. Leaves pale yellow-green below. Petals pink; anthers white."

Blakea campii has the vegetative apices setulose with barbellate hairs to 0.5 mm long, outer bracts only 4-4.5 mm wide and inner bracts 3.5-3.7 mm wide, anthers only ca 1.5-1.7 mm wide, and dorso-basal connective appendage ca 1.6 mm long and truncate. Blakea quadriflora Gleason has glabrous hypanthia, smaller petals, and blunt connective tooth only ca 1 mm long. In foliage (except for the somewhat closer spacing of the secondary veins), B. madisonii resembles B. pyxidanthus Triana; in that species however, the leaf pucule development is between the costa and interior primary veins and the bracts are shorter than the hypanthium and basally somewhat united. Sparre 17635 (Río Cayabe, Pastaza, Ecuador; S) probably represents an undescribed taxon related to B. pyxidanthus, the leaves however somewhat larger and with closer secondary vein intervals; more material of this population is needed for comparison with both B. pyxidanthus and B. portentosa Wurdack.

**BLAKEA PUNCTULATA** (Triana) Wurdack, comb. nov.

Topoea punctulata Triana, Trans. Linn. Soc. Bot. 28: 150. 1871.

Several recent collections (Cauca: La Costa near El Tambo, elev. 800-900 m, Sneidern 829 and 831, S; Nariño: Corregimiento Santander-Barbacoas, elev. 840-200 m, Garcia-Barriga 13132, US) have confirmed observations on the holotype (Triana 4089, BM); the anthers are thick (3.5-4 X 2 X 2 mm), not appendaged, with two separate (0.7 mm) minute pores ventrally, the style glabrous and barely immersed in a short ovarian collar, and the stigma capitate (ca 1.5 mm diam). The relations are apparently with B. subconnata Berg ex Triana and its relatives with exappendiculate anthers and capitate stigmas.

**TOPOBEA MACBRYDEI** Wurdack, sp. nov.

In systemate Cogniauxii T. parasitiae Aublet affinis, foliis ad basim acutis pedicellis longioribus calycis lobis lateraliter imbricatis differt.

Ramuli primum quadrangulati mox teretes sicut laminarum subtus venae primariae et secundariae petiolique indumento appresso arachnoideo caduco induiti alioqui glabri. Petioli 3-4 cm longi; lamina oblongo-elliptica apice abrupte per 1-1.5 cm caudato-acuminato basi acuta, subcoriacea et essentialiter integra, 16-20 X 5.5-8 cm, 5-nervata nervis secundariis principalibus 1.5-2 mm inter se distantibus. Flores in quoque nodo superiore 4-6, pedicellis 3.5-4 cm longis sparse verruculosis; bracteae omnino liberae glabrae paulo firmae calyces paulo superantes; bracteae exteriores 9.5-10 X 7.5-8.5 mm late ellipticae apice hebeti-apiculato; bracteae interiores 10 X 10 mm orbicularis apice truncato-rotundato. Hypanthium 5 mm longum glabrum; calycis tubus ca 1 mm altus, lobis 2 X 4.6 mm oblates lateraliter ca 0.6 mm imbricatis. Petala glabra 13 X 10-11 mm

obovata apice rotundato-truncato. Filamenta 6.5 mm longa; thecae 6 X 1.4 X 1.2 mm subulatae poro ca 0.25 mm diam. dorsa-liter inclinato; dens dorso-basalis 0.4-0.5 mm longus hebes. Stigma non expansum; stylus 10.5 X 0.7-0.4 mm glaber in ovarii collo ca 1 mm immersus; ovarium ca 1/5 inferum glabrum.

Type Collection: Bruce MacBryde 963 (holotype US 2852134), collected in cloud forest about one hour by trail from base camp at headwaters of Río Piuntza overlooking Río Zamora, NW range of Cordillera del Cóndor, Prov. Morona-Santiago, Ecuador, elev. 1850 m, 5 January 1972. "Tree to 4 m, older leaves red; petals white; anthers yellow; fruit green."

Topoea parasitica has relatively wider leaf blades rounded to subcordate at the base, pedicels up to ca 1 cm long, calyx lobes broadly triangular and remote at the base, and longer (8.5-9 mm) more slender anthers. Other species in the complex around T. parasitica include those previously cited by me (Flora de Venezuela 8: 375), as well as T. floribunda Gleason (which has a non-expanded stigma, rather than capitite as originally described) and T. pubescens Gleason. The general aspect of T. macbrydei (but not the internal floral details) is rather like that of Blakea punctulata (Triana) Wurdack (vide supra).

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NOTES ON NEW AND NOTEWORTHY PLANTS. CXXVI

Harold N. Moldenke

ERIOCAULON SEXANGULARE var. MICRONESICUM Mold., var. nov.

Haec varietas a forma typica speciei statura plerumque minori foliis angustioribus gracilioribus capitulis minoribus recedit.

The type of this variety was collected by D. O. Otobed (no. P. 10143) at Ngerpang, on Babeldaob island, Palau Islands, deposited in the United States National Herbarium at Washington.

PAEPALANTHUS BIFIDUS f. PARVICAPITULATUS Mold., f. nov.

Haec forma a forma typica speciei capitulis parvioribus 2-4 mm. latis bracteis non perspicue prolongatis recedit.

This form differs from the typical form of the species in having smaller heads, these being mostly only 2-4 mm. in diameter, with none of the involucral bracts prolonged beyond the flowers. The type was collected by G. T. Prance and E. Lleras (no. 23719) in a disturbed white sand area along the Rio Tarumazinho, Manaus, Brazil, on July 7, 1976, and is deposited in my personal herbarium.